

In the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1. – 26. (Canceled).

27. (New) A method in a coin counting machine for processing multiple coins received from a user, the method comprising:

moving at least one coin along a coin path;

sensing a characteristic of the coin to determine if the coin is an acceptable coin or an unacceptable coin;

when the coin is determined to be an acceptable coin, causing the coin to move off of the coin path; and

when the coin is determined to be an unacceptable coin, allowing the coin to proceed along the coin path.

28. (New) The method of claim 27 wherein causing the coin to move off of the coin path includes accepting the coin by actuating a coin mover positioned adjacent to the coin path.

29. (New) The method of claim 28 wherein actuating the coin mover includes actuating a resilient door positioned adjacent to the coin path, the resilient door having a retracted position at least generally clear of the coin path and a deflected position at least partially blocking the coin path.

30. (New) The method of claim 28 wherein moving the coin along the coin path includes moving the coin along a first part of the coin path under the force of gravity, wherein allowing the unacceptable coin to proceed along the coin path includes allowing the unacceptable coin to continue moving along a second part of the coin path under the force of gravity, and wherein the first part of the coin path is positioned

upstream of the coin mover and the second part of the coin path is positioned downstream of the coin mover.

31. (New) The method of claim 28 wherein moving the coin along the coin path includes rolling the coin along a first part of the coin path under the force of gravity, wherein allowing the unacceptable coin to proceed along the coin path includes allowing the unacceptable coin to continue rolling along a second part of the coin path under the force of gravity, and wherein the first part of the coin path is positioned upstream of the coin mover and the second part of the coin path is positioned downstream of the coin mover.

32. (New) The method of claim 27 wherein moving the coin along the coin path includes moving the coin along a first part of the coin path under the force of gravity, wherein allowing the unacceptable coin to proceed along the coin path includes allowing the unacceptable coin to continue moving along a second part of the coin path under the force of gravity, and wherein the first part of the coin path and the second part of the coin path are at least generally aligned with each other.

33. (New) The method of claim 27 wherein causing the acceptable coin to move off of the coin path includes deflecting the acceptable coin off of the coin path and into a coin receptacle for collection by the coin counting machine.

34. (New) The method of claim 27 wherein allowing the unacceptable coin to proceed along the coin path includes returning the unacceptable coin to a user of the coin counting machine.

35. (New) A method for separating acceptable coins from unacceptable coins in a coin counting machine, the method comprising:
moving a first coin along a coin path;

sensing a characteristic of the first coin to determine if the first coin is an acceptable coin or an unacceptable coin;

moving a second coin along the coin path;

measuring a gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap;

when the first coin is determined to be an acceptable coin and the measured gap is determined to be an acceptable gap, actuating a coin mover positioned adjacent to the coin path to cause the first coin to move off of the coin path; and

when the first coin is determined to be an acceptable coin and the measured gap is determined to be an unacceptable gap, allowing the first coin to proceed along the coin path.

36. (New) The method of claim 35, further comprising, when the first coin is determined to be an unacceptable coin, allowing the first coin to proceed along the coin path.

37. (New) The method of claim 35 wherein measuring the gap between the first coin and the second coin to determine if the gap is an acceptable gap or an unacceptable gap includes comparing the measured gap to a first criteria to determine if the measured gap meets the first criteria, and wherein the method further comprises:

when the first coin is determined to be an unacceptable coin, sensing the second coin with the coin sensor positioned adjacent to the coin path to determine if the second coin is an acceptable coin or an unacceptable coin;

when the second coin is determined to be an acceptable coin:

comparing the measured gap between the first coin and the second coin to a second criteria to determine if the measured gap meets the second criteria;

when the measured gap between the first coin and the second coin meets the second criteria, actuating the coin mover positioned adjacent to the coin path to cause the second coin to move off of the coin path; and

when the measured gap between the first coin and the second coin does not meet the second criteria, allowing the second coin to proceed along the coin path.

38. (New) The method of claim 37 wherein the first criteria is a first distance and the second criteria is a second distance less than the first distance.

39. (New) The method of claim 35 wherein measuring the gap between the first coin and the second coin relative to the coin path includes determining a spatial distance between the first coin and the second coin.

40. (New) The method of claim 35 wherein measuring the gap between the first coin and the second coin relative to the coin path includes determining a time increment between the first coin and the second coin.

41. (New) The method of claim 35 wherein actuating the coin mover to cause the first coin to move off of the coin path includes deflecting the first coin off of the coin path and into a coin receptacle for collection by the coin counting machine.

42. (New) The method of claim 35 wherein allowing the first coin to proceed along the coin path includes allowing the first coin to proceed along the coin path for return to a user of the coin counting machine.

43. (New) The method of claim 35 wherein measuring the gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap includes:

measuring a time increment related to the passages of the first coin and the second coin relative to the coin sensor; and

determining a distance between the first coin and the second coin based on the measured time increment and a velocity associated with the second coin, an

acceleration associated with the second coin, or both the velocity and the acceleration associated with the second coin.

44. (New) A method for separating acceptable coins from unacceptable coins in a coin counting machine, the method comprising:

moving a first coin along a coin path;

sensing the first coin with a coin sensor positioned adjacent to the coin path to determine if the coin is an acceptable coin or an unacceptable coin;

moving a second coin along the coin path;

measuring a gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap; and

when the first coin is determined to be an acceptable coin and the measured gap is determined to be an acceptable gap, selecting the first coin for collection by the coin counting machine; and

when the first coin is determined to be an acceptable coin and the measured gap is determined to be an unacceptable gap, rejecting the first coin for collection by the coin counting machine.

45. (New) The method of claim 44, further comprising, when the first coin is determined to be an unacceptable coin, rejecting the first coin for collection by the coin counting machine.

46. (New) The method of claim 44 wherein measuring a gap between the first coin and the second coin relative to the coin path includes determining a spatial distance between the first coin and the second coin.

47. (New) The method of claim 44 wherein selecting the first coin for collection by the coin counting machine includes diverting the first coin off of the coin path and into a coin receptacle, and wherein rejecting the first coin for collection by the

coin counting machine includes allowing the first coin to proceed along the coin path for return to a user of the coin counting machine.

48. (New) The method of claim 44 wherein measuring the gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap includes:

measuring a time increment related to the passages of the first coin and the second coin relative to the coin sensor; and

determining a distance between the first coin and the second coin based on the measured time increment and a velocity associated with the second coin, an acceleration associated with the second coin, or both the velocity and the acceleration associated with the second coin.

49. (New) A method in a coin counting machine for separating coins received from a user into acceptable coins and unacceptable coins, the method comprising:

moving a first coin along a coin path;

moving a second coin along the coin path;

measuring a gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap; and

when the measured gap is determined to be an unacceptable gap, returning the first coin to the user.

50. (New) The method of claim 49 wherein measuring the gap between the first coin and the second coin relative to the coin path includes determining a spatial distance between the first coin and the second coin.

51. (New) The method of claim 49 wherein measuring the gap between the first coin and the second coin relative to the coin path includes determining a time increment between the first coin and the second coin.

52. (New) The method of claim 49 wherein measuring the gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap includes:

measuring a time increment associated with the first coin and the second coin passing a coin sensor; and

determining a distance between the first coin and the second coin based on the measured time increment and a velocity associated with the second coin, an acceleration associated with the second coin, or both the velocity and the acceleration associated with the second coin.

53. (New) The method of claim 49 wherein moving the first coin along the coin path includes moving the first coin along a first part of the coin path under the force of gravity, and wherein returning the first coin to the user includes allowing the first coin to proceed along a second part of the coin path under the force of gravity.

54. (New) A method for selecting coins in a coin counting machine, the coin counting machine including a coin sensor and a coin mover, the coin sensor and the coin mover being positioned adjacent to a coin path and being spaced apart to define a distance between the coin sensor and the coin mover, the method comprising:

moving a coin along the coin path relative to the coin sensor;

as the coin moves relative to the coin sensor, measuring the velocity of the moving coin, the acceleration of the moving coin, or both the velocity and the acceleration of the moving coin; and

based on the distance between the coin sensor and the coin mover and the measured velocity of the moving coin, the measured acceleration of the moving coin, or both the measured velocity and the measured acceleration of the moving coin, determining when to actuate the coin mover causing the coin mover to move the coin.

55. (New) The method of claim 54 wherein moving the coin along the coin path includes rolling the coin along an inclined path between the coin sensor and the coin mover.

56. (New) The method of claim 54 wherein determining when to actuate the coin mover includes determining when to deflect a resilient door positioned adjacent to the coin path to divert the coin off of the coin path.

57. (New) The method of claim 54 wherein measuring the velocity of the moving coin includes:

- identifying the coin;
- obtaining a radius for the identified coin;
- determining the amount of time it takes the coin to travel a distance equivalent to the obtained radius; and
- calculating the velocity of the moving coin based on the determined amount of time and the obtained radius.

58. (New) The method of claim 54 wherein measuring the acceleration of the moving coin includes:

- determining a first coin velocity at a first point along the coin path;
- determining a second coin velocity at a second point along the coin path different than the first point; and
- calculating an acceleration of the moving coin based on the determined first coin velocity and the determined second coin velocity.

59. (New) A system for processing a plurality of coins received from a user, the system comprising:

- means for moving at least one of the plurality of coins along a coin path;
- means for determining if the coin is an acceptable coin or an unacceptable coin as the coin is moving along the coin path;

means for accepting the coin when the coin is determined to be an acceptable coin by diverting the coin off of the coin path; and

means for returning the coin to the user when the coin is determined to be an unacceptable coin by allowing the coin to proceed along the coin path.

60. (New) The system of claim 59 wherein the means for moving the at least one coin along the coin path includes means for rolling the at least one coin along a coin path that is at least generally straight from the means for determining to the means for accepting.

61. (New) A system for separating acceptable coins from unacceptable coins in a coin counting machine, the system comprising:

means for moving a first coin along a coin path;

means for determining if the first coin is an acceptable coin or an unacceptable coin as the first coin is moving along the coin path;

means for moving a second coin along the coin path;

means for measuring a gap between the first coin and the second coin relative to the coin path to determine if the gap is an acceptable gap or an unacceptable gap; and

means for accepting the first coin by causing the first coin to move off of the coin path when the first coin is determined to be an acceptable coin and the measured gap is determined to be an acceptable gap.

62. (New) The system of claim 61, further comprising means for rejecting the first coin by allowing the first coin to proceed along the coin path when the first coin is determined to be an unacceptable coin or the measured gap is determined to be an unacceptable gap.

63. (New) The system of claim 61 wherein the means for measuring the gap between the first coin and the second coin relative to the coin path include means for determining a spatial distance between the first coin and the second coin.

64. (New) The system of claim 61 wherein the means for measuring the gap between the first coin and the second coin relative to the coin path include means for determining a velocity, an acceleration, or both a velocity and an acceleration of the first coin.

65. (New) A coin counting machine comprising:
a coin path;
a coin sensor positioned adjacent to the coin path and configured to discriminate acceptable coins from unacceptable coins; and
a coin mover positioned adjacent to the coin path downstream of the coin sensor, wherein the coin mover is configured to move acceptable coins off of the coin path and allow unacceptable coins to proceed along the coin path.

66. (New) The coin counting machine of claim 65 further comprising a computer processor operably connected to the coin sensor and the coin mover, the computer processor being configured to receive coin discrimination information from the coin sensor and provide an actuation signal to the coin mover when the coin discrimination information indicates an acceptable coin is proceeding along the coin path from the coin sensor to the coin mover.

67. (New) The coin counting machine of claim 65 further comprising a computer processor operably connected to the coin sensor and the coin mover, the computer processor being configured to receive coin discrimination information from the coin sensor and provide an actuation signal to the coin mover when the coin discrimination information indicates an acceptable coin is proceeding along the coin path from the coin sensor to the coin mover, the actuation signal causing the coin

mover to deflect relative to the coin path and divert the acceptable coin off of the coin path and into a coin receptacle for collection by the coin counting machine.